

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

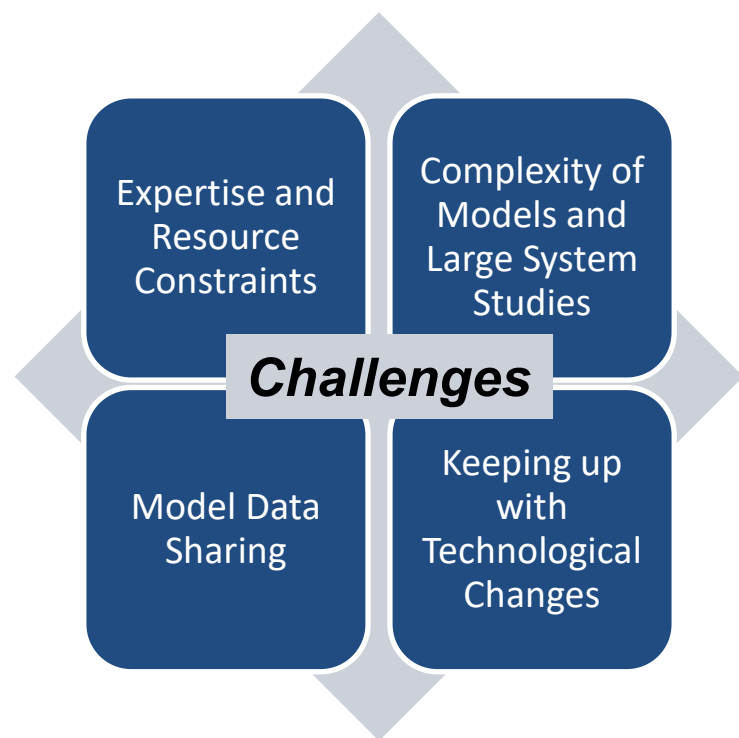
Need for EMT Expertise

Insights from Survey by Electromagnetic Transients Modeling Working Group

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Engineering and Security Integration, NERC

2025 Electromagnetic Transient Simulation workshop
October 7, 2025

RELIABILITY | RESILIENCE | SECURITY



Near Term Actions

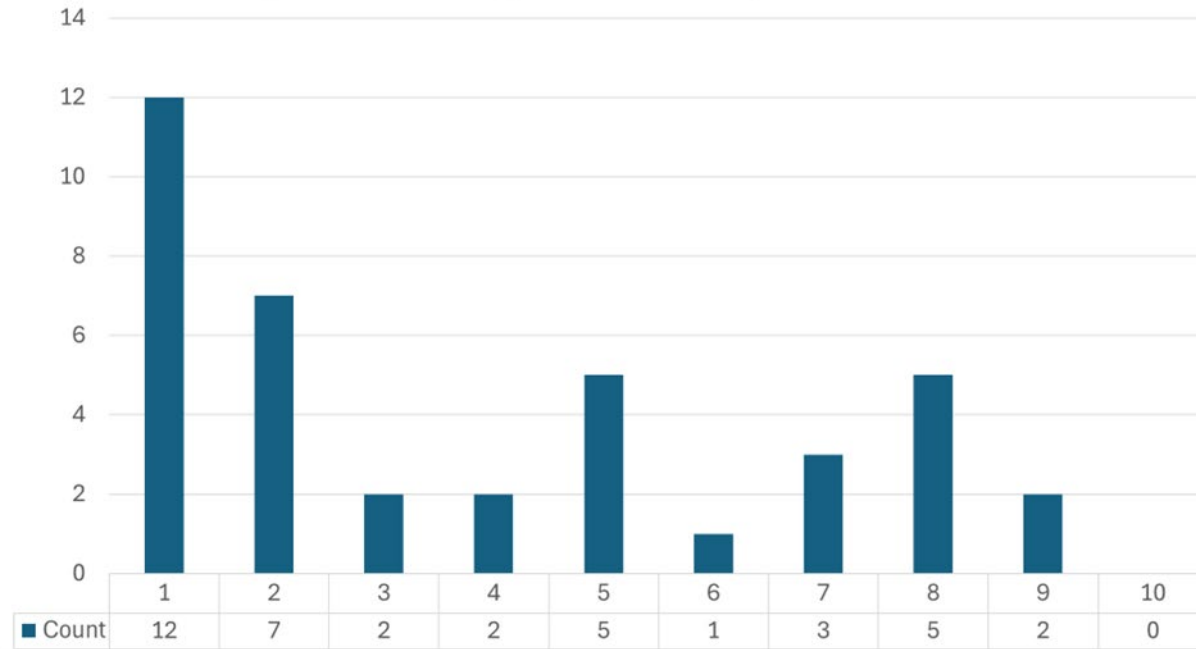
- Broaden training and resources
- Harmonization of modeling practices
- Investment in infrastructure
- Early model verification and coordination

Long Term Actions

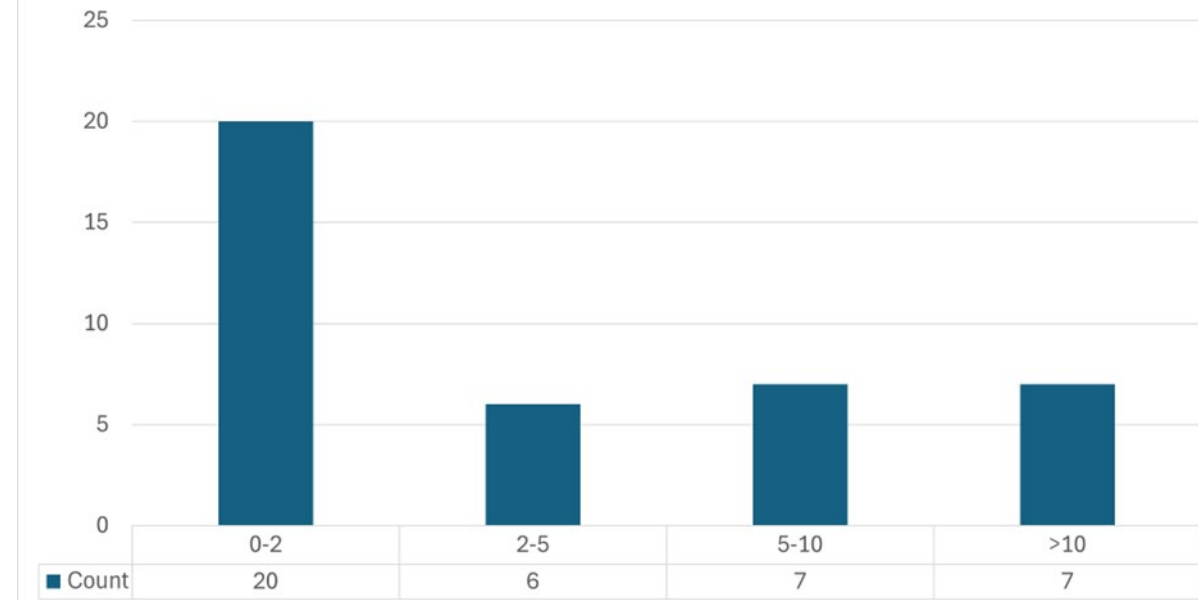
- Optimize software compatibility
- Leverage high-performance computing solutions
- Advance automation and interoperability
- Improve data sharing

EMT Adoption Survey – EMT Expertise Assessment

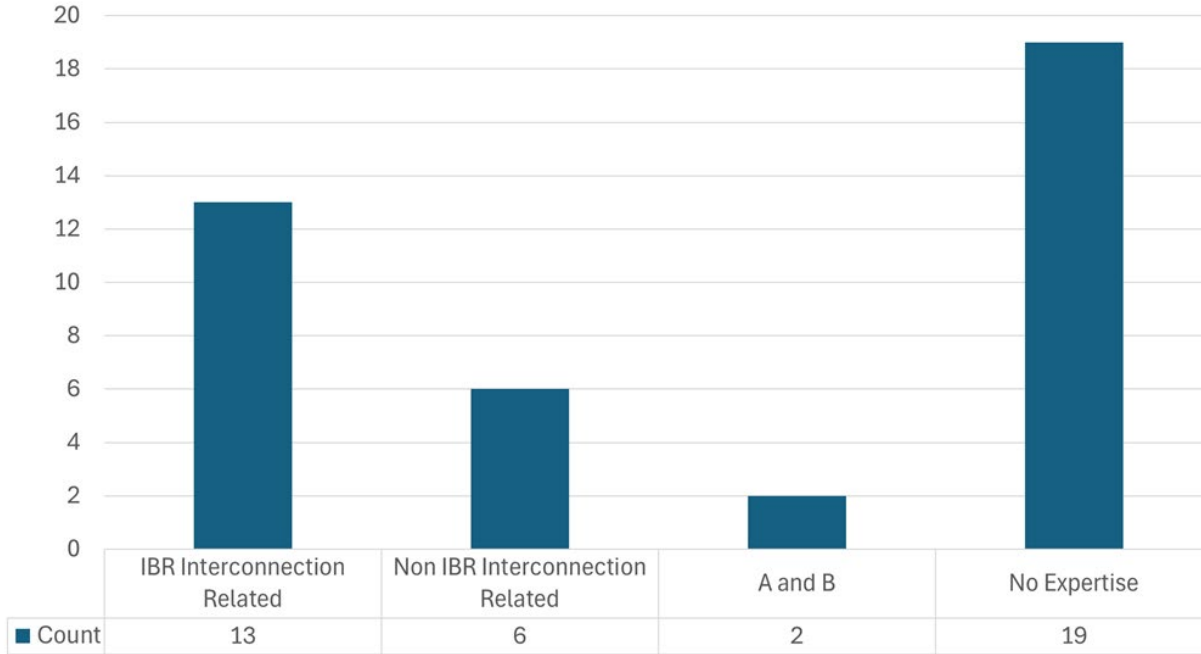
Q 40. On a scale of 1 to 10 what level of EMT expertise do you have available or expect to have among your team and at organizational level?



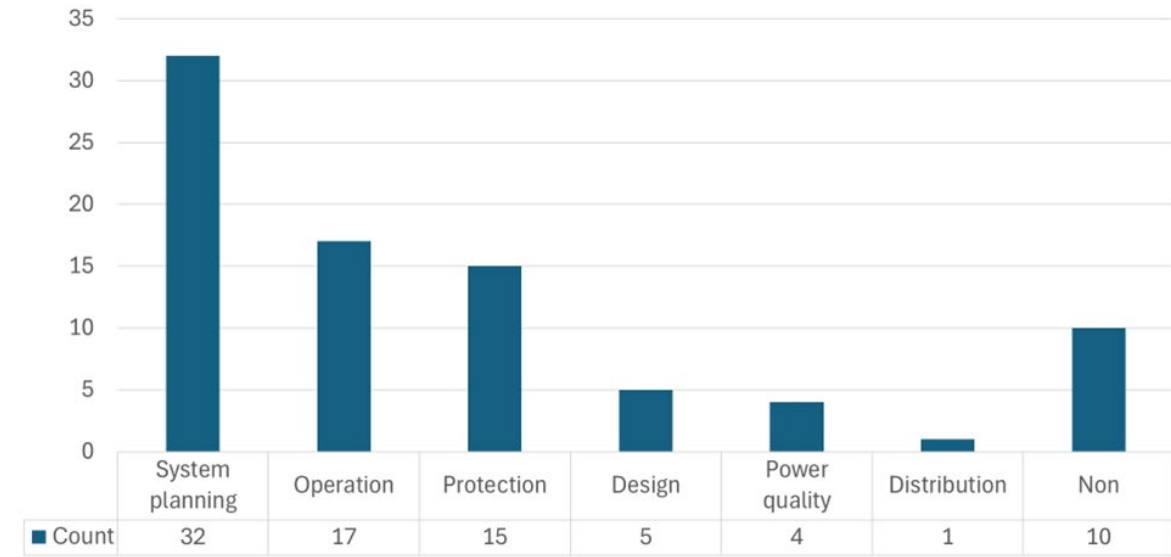
Q 40.a. Please advise on the years of experience of the organization in performing EMT simulation as well as the number of years of expertise available at the organization.

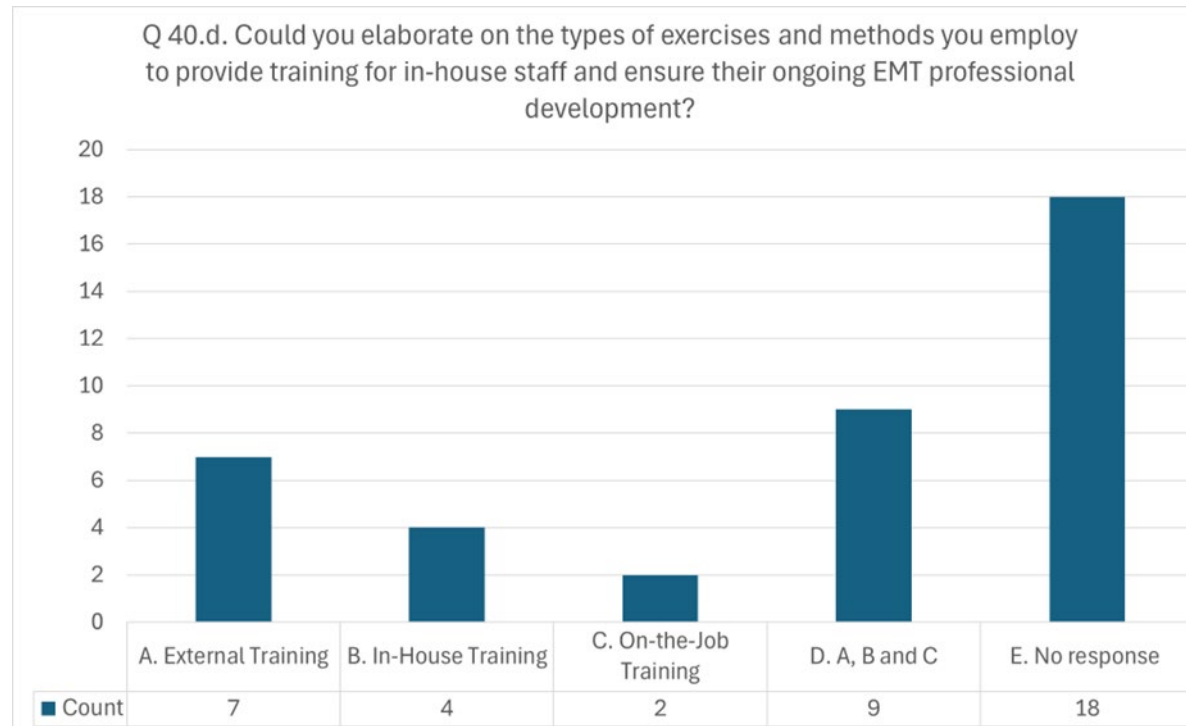


Q 40.b. What sort of expertise (compliance with EMT requirements, design, tune the models, transmission planning)?



Q 40.c. What sort of subject matter expertise (system planning, operations, protection, etc.) or areas do you see that can benefit from EMT modeling/studies?





- **Broaden Training and Resources:**

- Expand the availability of targeted training materials to address knowledge gaps, especially for those without defined resources.
- Consider establishing centralized repositories with up-to-date materials and industry best practices.

- **Foster Knowledge Sharing and Mentorship:**

- Promote a culture of continuous learning by establishing formal knowledge-sharing groups and pairing new staff with experienced engineers.
- Creating opportunities for industry collaboration and formal training can ensure that best practices are widely adopted.



Questions and Answers